



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/073,193 | 02/13/2002 | Pascal Nicolle | SCHN:018 | 5283 |

6160 7590 01/05/2005
PARKHURST & WENDEL, L.L.P.
1421 PRINCE STREET
SUITE 210
ALEXANDRIA, VA 22314-2805

EXAMINER

PEREZ DAPLE, AARON C

ART UNIT PAPER NUMBER

2154

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/073,193

Applicant(s)

NICOLLE ET AL.

Examiner

Aaron C Perez-Daple

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Action is in response to RCE filed 10/6/04, which has been fully considered.
2. Amended claims 1, 4-11 and 13-16 are presented for examination.
3. Claims 2, 3 and 12 are cancelled by Applicant.
4. This Action is non-Final.

Specification

5. The disclosure is objected to because of the following informalities: headings should be provided for each section of the specification. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

Art Unit: 2154

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

6. **Claims 4-9** are objected to because they depend from a cancelled claim. The Examiner interprets that the claims should depend from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claims 1 and 4-10** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, lines 5-7 of claim 1 recite "a plurality of grammar files all written in XML language in text format" As described on page 14, lines 7-17, of the specification, the grammar files are disclosed as being in either the ".dtd" or ".xsd" formats. The Examiner notes that although .dtd and .xsd files may be used with XML, they are in fact distinct from

the XML language. The specification does not disclose that the grammar files may be in any other format (i.e. XML). Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. As dependent claims, claims 4-10 suffer from the same deficiencies as claim 1.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 1 and 4-10** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, lines 7-9 of claim 1 recite, "each said grammar file comprising a description grammar describing a syntax of a respective graphic automation language written in the XML language." It is not clear which element is being claimed as "written in the XML language." It is clear from the specification that the "graphic automation language" is distinct from the XML language (see pg. 3, lines 11-19).

Therefore, the graphic automation language could not itself be XML. The Examiner interprets that "written in the XML language" refers back to the grammar file and description file (note: since a file can have only one format, the description grammar must already be in XML, if the grammar file is claimed as XML). Because the limitation in claim 1, "grammar files all written in XML," has not been enabled by the specification (see 112, first paragraph, rejection above), it is unclear how to interpret this limitation in the claims. For the purpose

of applying prior art, the Examiner finds that any grammar files for describing the syntax of a graphic automation language are sufficient to anticipate the claim limitation.

Claim 1 is further confused by the recitation in lines 12-15 that, "each such XML application description file...written in at least one graphic automation language compliant with XML." It is not clear whether the XML application description file is being claimed as written in XML or in the graphic automation language. Based on pg. 8, lines 2-16, of the specification, the Examiner interprets that the XML application description files are written in XML. For the purpose of applying prior art, the Examiner further interprets that the automation program is written in the "graphic automation language," although the Examiner notes that it would not take this form until after it was translated.

The term "such" recited in lines 12 and 17 of claim 1 and line 2 of claim 4 is a relative term which renders the claims indefinite. The term "such" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purpose of applying prior art, the Examiner interprets "such" to mean "said." Any further recitations of the term "such" in claims 1 and 4-10 are rejected on the same grounds.

12. As dependent claims, claims 4-10 suffer from the same deficiencies as claim 1.
13. Claim 4 is further rejected as indefinite because, although a single file may contain data for defining additional files, it is unclear how a single file may itself comprise multiple files.
14. **Claims 11 and 13-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, lines 5-7 of claim 11 recite "each said XML

application...written in at least one graphic automation language.” However, lines 3-5 already recite that the XML application description file is expressed in XML. Therefore, it is not clear whether the application description file is being claimed as written in XML or in the graphic automation language. Based on pg. 8, lines 2-16, of the specification, the Examiner interprets that the XML application description files are written in XML. For the purpose of applying prior art, the Examiner further interprets that the automation program is written in the “graphic automation language,” although the Examiner notes that it would not take this form until after it was translated.

15. Claim 14 is further rejected as indefinite because the term "such" recited in line 4 is a relative term which renders the claims indefinite. The term "such" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purpose of applying prior art, the Examiner interprets “such” to mean “said.” Any further recitations of the term “such” in claims 11 and 12-16 are rejected on the same grounds.

16. **Claims 1-16** are rejected as indefinite because the acronyms (e.g. XML, SFC, etc.) should be fully recited at least once within each set of claims with the acronym provided in parenthesis. e.g. eXtensible Markup Language (XML).

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. **Claims 1, 4, 5, 11, 13, 14 and 16** are rejected under 35 U.S.C. 102(e) as being anticipated by Muenzel (US 2002/004804 A1) (hereinafter Muenzel).
19. As for claim 1, Muenzel discloses a programming station for generating an automation program to be executed in automation equipment, said programming station comprising:
 - an internal memory (memory 26, Fig. 1) for storing a plurality of grammar files (XML schema or DTD, paragraph 0027) all written in XML language in text format, each said grammar file comprising description grammar describing a syntax of a respective graphic automation language written in the XML language which is recognizable in an XML application description file, said internal memory for storing at least one such XML application description file (markup formatted file 64, Fig. 2), each such XML application description file describing part of an automation program for execution in automation equipment and written in at least one graphic automation language compliant with the XML language (paragraphs 0039-0041, Fig. 2),
 - wherein said programming station is for using at least one of said description grammars to generate such automation program (paragraph 0041).
20. As for claim 4, Muenzel discloses the programming station according to claim 1, wherein said at least one application description file comprises an application program description file, an application input-output description file, and an application data description file (considered inherent to automation control systems; paragraph 0003).

Art Unit: 2154

21. As for claim 5, Muenzel discloses the programming station according to claim 1, wherein:

said grammar file comprises a Ladder language description program, wherein at least one application element of an application is described as an object comprising at least one attribute comprising at least one of objects, parameters, variables and texts (paragraph 0004), and

the internal memory is for storing information having a tree structure (flowchart 52, Fig. 2).

22. As for claim 11, Muenzel discloses an automation equipment for executing an automation program, comprising memory means (memory 26, Fig. 1) for storing a plurality of automation XML application description files (markup formatted files 64, Fig. 2) expressed in XML language, each said XML application description file describing at least part of an automation program and written in at least one graphic automation language compliant with the XML language (paragraphs 0039-0041, Fig. 2), the automation equipment also comprising translation means for converting each XML application description file into a binary language that can be executed by the automation equipment (step 66, Fig. 2).

23. As for claim 13, Muenzel discloses the automation equipment according to claim 11 wherein the set of XML application description files contains an application program description file, an application input-output description file, and an application data description file (considered inherent to automation control systems; paragraph 0003).

24. As for claim 14, Muenzel discloses the automation equipment according to claim 11, further comprising a grammar file (XML schema or DTD, paragraph 0027) storing a

description grammar, said description grammar for translation of at least a part of such automation program from at least one graphic automation language into XML language (paragraph 0027).

25. As for claim 16, Muenzel discloses the automation equipment according to claim 14 wherein the graphic automation language used by the automation equipment includes at least one language among the Ladder language, the SFC language and the FBD language (paragraph 0004).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. **Claims 6-10** are rejected under 35 U.S.C. 103(a) as being obvious over Muenzel in view of Nixon et al. (US 5,801,942) (hereinafter Nixon).
28. As for claims 6-10, although Muenzel discloses translating means for interfacing with a variety of applications (paragraph 0009) and the use of graphical automation languages including SFC and ladder logic (paragraph 0004), Muenzel does not explicitly teach the specific claimed elements of the applications (e.g. links, jumps, coils, etc.). Nixon discloses the specific limitations of claims 6-10 and 16, as laid out in the previous rejection, paper no. 4. It would have been obvious to one of ordinary skill in the art to modify Muenzel to incorporate the teachings of Nixon because this would allow for interfacing various devices

with a variety of traditional application programs, as selected by the user, and would further allow for easy modification and simplified program design, as taught by Nixon (col. 3, lines 39-65, "Several control languages...a control strategy."; col. 9, lines 33-45, "The process control...in that language.").

29. **Claim 15** is rejected under 35 U.S.C. 103(a) as being obvious over Muenzel in view of Lau (US 6,598,219 B1). As for claim 15, Muenzel does not specifically disclose means of checking that the description of the application in the XML language satisfies the description grammar of the graphic automation language used. Lau teaches a means for translating data using XML which includes means of checking the arrangement of the data in order to validate the arrangement of the data and prevent errors (col. 2, line 66 - col. 3, line 20, "According to an...according to XML."). It would have been obvious to one of ordinary skill in the art to modify the teachings Muenzel by checking that the description of the application in the XML language satisfies the description grammar of the graphic automation language used, in order to validate the arrangement of the data and prevent errors, as taught by Lau.

Response to Arguments

30. Applicant's arguments with respect to claims 1, 4-11 and 13-16 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2154

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2003/0121000 A1, note details of translation process;

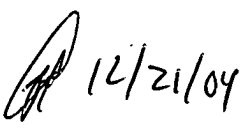
US 6,565,609 B1, note use of XML for data translation;


US 6,757,869 B1, note abstract, Figs. 8-11.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (571) 272-3974. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Aaron Perez-Daple


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100